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Epidemiology, Prevention Division
Wells Fargo Center
999 Third Avenue, Suite 900
Seattle, WA 98104-4039

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Anthrax Update

Since October 4th, 2001, 23 cases of anthrax have been diagnosed in the U.S. Inhalational anthrax has been diagnosed in 11 persons (5 of these fatal) and 12 persons were diagnosed with cutaneous anthrax (none were fatal). All but two of the 23 cases have occurred in persons associated with major media establishments, or the U.S. Postal Service. In the investigations of a hospital stock worker in New York City and an elderly woman in Connecticut, both of whom died of inhalational anthrax, results to-date from the environmental samples taken at their homes, local post offices and work sites have been negative for anthrax. The source of infection for these 2 cases is still unknown.

Differentiating Anthrax From Influenza

As we move into the influenza and respiratory virus season, we anxiously anticipate the many patients with influenza-like-illness (ILI) who will be concerned that they have anthrax this year. Considering that children average three to six episodes of ILI (characterized by fever, fatigue, cough and other symptoms) per year and adults average one to three episodes per year, concern is not unwarranted. Please reassure your patients about the extremely low risk of anthrax in the absence of known history of exposure or occupational/environmental risk.

A combination of epidemiologic, clinical and, if indicated, laboratory and radiographic test results can help in evaluating persons in whom anthrax is a potential concern. For more extensive information about discerning the difference between ILI and anthrax, please see the November 9th, 2001 MMWR[1]. The following are highlights from that article:

Clinical Findings

Though details on the 11th case of inhalational anthrax are not known at this time, of the first ten cases of inhalational anthrax, only one had rhinorrhea, but all had fever/chills and fatigue/malaise, and eight had nausea or vomiting. Drenching sweats were a prominent symptom in 7 cases.

Testing

There is no rapid test to identify someone in the early stages of anthrax. Rapid tests for influenza are available, however they are characterized by low sensitivity (45% to 90%) and are highly dependent on specimen quality. Thus, a significant proportion of persons with influenza will be missed by these tests. In addition, studies have documented influenza infection in only about one-third of persons with ILI. None the less, rapid influenza testing in concert with viral culture on a subset of patients presenting with ILI may give you an idea of what influenza viruses are circulating and help you in diagnosing patients who visit your practice. You can see which influenza viruses are currently circulating in King County on Public Health's website: (http://www.metrokc.gov/health/immunization/fluseason.htm#activity). As of the week ending November 3rd, one case of influenza A, H1N1, has been reported in King County. In general, most cases of ILI are caused by viruses other than influenza (e.g. RSV, parainfluenza, adenovirus) and occasionally by bacteria (e.g. *M. pneumoniae*, *C. pneumoniae*).

All 10 of the initial inhalational anthrax cases had abnormal chest radiographs (CXR) on initial presentation; seven had mediastinal widening, seven had infiltrates and eight had plural effusion. CT scans were valuable in picking up these abnormalities and may show mediastinal lymphadenopathy before abnormalities are present on CXR. The high proportion of patients with pneumonia is a feature of anthrax associated with this bioterrorist attack that is different than what would be expected based on previous reports of naturally-occurring cases.

[1]CDC. Notice to readers: considerations for distinguishing influenza-like illness from inhalational anthrax. MMWR 2001;50:984-6. This and other articles can be found at WWW.BT.CDC.gov.

Blood cultures were positive in all seven of the inhalational anthrax patients who had not received antibiotics. Animal data suggests blood cultures may be positive relatively early in the course of illness.

Though not all persons with ILI should receive blood cultures, blood culture, along with a Gram's stain of a blood smear, chest radiograph (and possibly CT scan) should be considered in any patient with evidence of ILI and sepsis or ILI and a suspicious exposure or high-risk occupation.

Training Opportunities

There will be a satellite broadcast **Smallpox: What Every Clinician Should Know** on December 13th, 2001 from 9 to 11. The broadcast will be shown in the Blanchard Plaza Building at 2201 6th Ave, (6th and Blanchard) in Seattle. Please call Chris Diepenbrock at (206) 615-2010 to register for this program. CE credit is available for this program. To view this presentation via webcast (on or after December 13th) go to: http://www.sph.unc.edu/about/webcasts/. Other bioterrorism related archived webcasts can also be viewed at that site. A few of the recent broadcasts also available are:

- **CDC Responds: Bioterrorism and the Healthcare Epidemiology / Infection Control Team, Nov. 16, 2001**
- **CDC Responds: Coping with Bioterrorism - The Role of the Laboratorian, Nov. 9, 2001**
- **CDC Responds: Anthrax: What every clinician should know Part II, CDC, Nov. 1, 2001**
- **CDC Responds: Anthrax: What every clinician should know, CDC, Oct. 18, 2001**

Getting Connected with Public Health

Here are a couple of ways that you can stay connected to the wide variety of information that Public Health makes available to providers:

- **Broadcast Fax List**: If you subscribe to our broadcast fax list, you will receive a fax from our office whenever particularly urgent messages or Health Alerts are issued. Recent broadcast fax messages have included Health Alerts about anthrax and information about reporting unexplained critical illness and death to the King County Medical Examiner and Public Health. To be placed on the broadcast fax list, call Amy Patton at 206-205-5803.
- **Web Page Update Alerts:** By visiting the web sites below you can choose to receive an e-mail alert whenever the following Public Health Web pages are updated:

  Bioterrorism Page
  (http://www.metrokc.gov/health/scripts/btupdate.cfm).

  ***Epi-Log* Page**
  (http://www.metrokc.gov/health/scripts/epilogrequest.cfm)

  Influenza Page
  (http://www.metrokc.gov/health/scripts/fluseasonsignup.cfm)

Disease Reporting

AIDS.....(206) 296-4645
Communicable Disease .....(206) 296-4774
STDs .....(206) 731-3954
Tuberculosis.....(206) 731-4579
24-hr Report Line .....(206) 296-4782

Hotlines and Websites:

CD Hotline.....(206) 296-4949
HIV/STD Hotline.....(206) 205-STDS
www.metrokc.gov/health

Reported Cases of Selected Diseases, Seattle & King County 2001

NR=Not Reportable in 2000	Cases Reported in October		Cases Reported through October	
	2001	2000	2001	2000
AIDS	7	29	214	231
Campylobacteriosis	25	31	264	278
Cryptosporidiosis	6	NR	22	NR
Chlamydial infections	414	321	3607	3744
Enterohemorrhagic *E. coli* (non-O157)	1	NR	4	NR
***E. coli* O157: H7**	3	6	29	54
Giardiasis	25	18	132	194
Gonorrhea	156	103	1337	928
***Haemophilus influenzae* (cases <6 years of age)**	0	0	0	0
Hepatitis A	2	4	20	87
Hepatitis B (acute)	1	6	28	37
Hepatitis B (chronic)	85	NR	537	NR
Hepatitis C (acute)	0	1	9	10
Hepatitis C (chronic, confirmed/probable)	108	NR	1175	NR
Hepatitis C (chronic, possible)	49	NR	475	NR
Herpes, genital	68	43	600	637
Measles	0	0	12	2
Meningococcal Disease	1	1	8	12
Mumps	0	0	1	9
Pertussis	3	29	34	187
Rubella	0	0	0	1
Rubella, congenital	0	1	0	1
Salmonellosis	18	9	224	182
Shigellosis	14	7	97	139
Syphilis	4	6	47	36
Syphilis, congenital	0	0	0	1
Syphilis, late	1	0	36	23
Tuberculosis	8	14	104	103